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PATRIOT IETM DEVELOPMENT

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PATRIOT IETM DEVELOPMENT

- **The Past**
- **The Present**
- **The Future**

NOTE: The content in this presentation represents the perspective of *the author*.

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PATRIOT IETM DEVELOPMENT

THE PAST

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PATRIOT IETM DEVELOPMENT: The Past

- **1989: CALS initiative - converted 50,000 pages of OP/ORG/IM TMs**
  - **TEXT**
    - **First tried to create SGML per MIL-M-28001 and 38784 DTD**
    - **Didn't work because PATRIOT TM format didn't match 38784 DTD**
    - **Developed PATRIOT version of the DTD: reviewed by IMMC & CAS**
    - **Conversion software: Avalanche FastTAG, Brief Macros, Exoterica Normalizer & Checkmark (and BRUTE FORCE!)**
  - **GRAPHICS**
    - **Board art scanned into AutoCAD**
    - **FutureNet schematics converted to AutoCAD**
    - **Text font/size/layer standardized in IM and RPSTL files to enhance ability to auto-process**
    - **MIL-R-28002 CCITT G4 created by saving HPGL plot file from AutoCAD and importing to Xyvision composition system**

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PATRIOT IETM DEVELOPMENT: The Past

- **1990: Delivered first hardcopy TM composed from SGML using Xyvision XPP publisher with CALS package**
  - **Created 1840A magnetic tape with SGML and G4 files**
  - **Tested at IMMC and CTN (CALS Test Network)**

- **1991: IETM initiative**
  - **IDE/AS (Unisys/Paramax), Folio (CAS/PALS), Dynatext (EBT), ...**
  - **IMMC derived IADS from IDE/AS**
  - **Developed XTRAN (from Exoterica--now OmniMark from Stilo) scripts to batch convert source SGML into IADS SGML**
  - **IDE & G4 files delivered to IMMC via optical disk**

- **1992: First PATRIOT IETM CD produced (QRP, not authenticated)**

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PATRIOT IETM DEVELOPMENT: The Past

- **1993+: Successive years spent refining product**
- **IADS RPSTL TMs**
  - **Initially assembled by IMMC for RPSTL Reader (Part Information in DB, G4 graphics)**
  - **Subsequently assembled by Raytheon for IADS (Part Information in IDE files, G4 graphics plus auto-generated PIC overlay files with callouts hotspotted to Item Record in IDE file)**
  - **Subsequently assembled by Raytheon for IADS and RPSTL Reader**
    - **Front cover, TOC, Section I uses IADS**
    - **TOC links to List of Figures (LOF) and Graphical Navigation Aid (GNA)**
    - **GNA provides break-down of End Item and its major components in both illustration and tree-based views**
    - **LOF links to RPSTL Reader FG Record**
    - **Illustration callouts hotspotted to Fig/Item record in RPSTL Reader DB (TAG, REFDES & AutoCAD files used to auto-generate IADS PIC files)**

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THE PRESENT

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PATRIOT IETM DEVELOPMENT: The Present

- **MultiEdit w/custom macros used to edit source SGML on PC**
- **OmniMark used to parse SGML on Sun SPARC server**
- **Custom OmniMark scripts written to provide additional checks on SGML**
- **DWG2G4 (custom SW) used to create G4 directly from AutoCAD**
- **11 x 17 TMs still in the original 38784ish format**
  - **Each TM has one source SGML file**
  - **IADS IDE file automatically created from source SGML**
  - **Hardcopy PDF file (mostly) automatically created from source SGML**
  - **IADS and hardcopy final deliverables for all TMs**
  - **PDF available for Online Review via secure Internet connection (page-based, scanned)**

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PATRIOT IETM DEVELOPMENT: The Present

- **8.5 x 11 TMs (except RPSTL) in 40051ish format (different DTD)**
  - **Source SGML (originally batch converted from 38784 SGML baseline with minimal manual intervention)**
    - **Stored in XyEnterprise (formerly Xyvision) PDM (Oracle-based) DBMS**
    - **Each WP is separate object, so it can be shared between End Item and Configuration (i.e., author once, reuse multiple times)**
    - **WPs automatically assembled into TM SGML via a TM-skeleton SGML object**
    - **PDF and IDE files automatically created from source SGML**
  - **IADS final deliverable for all TMs**
  - **Hardcopy final deliverable for OP TMs (PDF/hardcopy available for all TMs for FMS)**
  - **PDF for Online Review via secure Internet connection (WP-based, automatically created)**

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PATRIOT IETM DEVELOPMENT: The Present

- **RPSTL final deliverables IADS and RPSTL Reader (PDF/hardcopy available for all TMs for FMS)**
- **All TMs linked via IQuest DB**
  - **non-RPSTL: REFDES, Description, Task Code, LCN**
  - **RPSTL: REFDES, Part Number, NSN, Description, Task Code**
  - **DAM REFDESes identified and appropriate response given to user**
- **IADS searching can be done at TM level and End Item level via use of Domain Files**

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THE FUTURE

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PATRIOT IETM DEVELOPMENT: The Future

- **Provide IETM Online Review**
- **Update 11 x 17 IM and 20-3 TM text & tables tagging to be consistent with that used for the 8.5 x 11 TMs?**
- **Unify IQuest RPSTL and non-RPSTL data fields (e.g., non-RPSTL TMs have no Part Number associations)?**
- **Add Functional Breakdown so user can do a functional walk-through the entire system (static IDE frames? IQuest or Search enhancement?)?**
- **Add signal tracing capability to FBDs and schematics?**
- **Hide data that doesn't apply to the particular HW/SW configuration of the equipment of interest?**
- **THE $KY IS THE LIMIT!**

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